

REMARKS

Claims 1-8 and 11-43 remain pending in the application upon entry of this amendment.

Claim 1 has been amended to incorporate the features of claim 10, now canceled. Accordingly, entry of this amendment and reconsideration of the application is respectfully requested.

Claims 1-8 and 11-43 have been amended to address the informalities raised by the Examiner.

I. REJECTION OF CLAIMS 1-8 AND 10-43 UNDER 35 USC §2ND ¶

Claims 1-8 and 10-43 stand rejected under 35 USC §112, second paragraph, as being indefinite. Specifically, the Examiner indicates that it is unclear in claim 1 which aspect of the regions (8,9) are asymmetric with respect to the polarization direction.

In response, applicants have amended claim 1 to clarify that the polarization modifying element (5) includes polarization directions of at least first and second sets of regions (8,9) asymmetric with respect to the first polarization direction. In view of such clarification, applicants respectfully request withdrawal of the rejection.

II. REJECTIONS OF CLAIMS 1-8 AND 10-43 UNDER 35 USC §102/§103

Claims 1, 2, 4-8 and 10-43 are rejected under 35 USC §103(a) based on Nishiguchi in view of May et al. Claim 3 is rejected based on the further combination of Jung. Applicants respectfully traverse the rejection for at least the following reasons.

Independent claim 1 has been amended to incorporate the features of claim 10. The subject matter of pending claim 10 recites the specific configuration of the output polarizer 7. Applicants respectfully submit that the Examiner's specified reliance on Nishiguchi as teaching such features appears misplaced for the reasons discussed in more detail below.

One of the significant features of the present invention lies with the accounting of different phase configurations in an asymmetric system. In an optical device system similar to the present invention that does not have adequate consideration for different phase configurations, variation in brightness intensity will be exhibited due to the relative phase shift between optical paths.

Variation in intensity across the display results from the patterning of the retarder 5 as the light transmitted through region 8 is subjected to both the slow and the fast axes, whereas the light transmitted through region 9 is subjected to the slow axes only, producing a non-uniform wavefront.

Accordingly, the present invention solves the aforementioned problem by outputting a plane wave which has equal phase across the display. More specifically, the output polarizer 7 is oriented to transmit only light from the regions 8 and 9, which has experienced the slow axis, effectively eliminating the fast axis component of light which is experienced by light transmitted through region 8. By filtering out the fast axis component of light, which has a different phase than the slow axes component, a wavefront with no spatial phase variation is outputted.

For such reasons, claim 1 has been amended to recite that the "output polarizer (7) is arranged to transmit only the slow axis component of light from the first and second set of regions (8,9)" as originally recited in claim 10.

Applicants note that the Examiner has already examined the subject matter of pending claim 10 and regards such a feature to be unpatentable in view of the disclosures of Nishiguchi at Col. 16, lines 20-24 (see article 15 in the Office Action). However, applicants respectfully disagree that Nishiguchi discloses the aforementioned feature originally set forth in claim 10, as outlined below.

Firstly, Nishiguchi (Col.16, lines 20-24) discloses only of a light beam emitted from an optical element in a circularly polarized manner, wherein the rotation is reversed for alternating columns of pixels (equivalent to alternating regions 8,9 in the present invention). The polarization binoculars 110 (equivalent to output polarizer 7),

are arranged with circular polarization films 110a and 110b, which selectively filter out one set of light beams depending on the direction of rotation for viewing with each appropriate eye.

It should be clear to one skilled in the art that circularly polarized light comprises two orthogonal components of light. Differently, in the claimed optical device system of present invention, the fast axis component of the light is filtered out, leaving only the orthogonal slow axis of light, which therefore can be considered to be linearly polarized. Nishiguchi, accordingly, only teaches of an output polarizer filtering out based on the direction of circular polarization and not filtering based on slow and fast axes of light. Therefore, the passage cited by the Examiner in Nishiguchi does not specifically disclose of the aforementioned feature.

Furthermore, there is no reason why one skilled in the art would be compelled to modify the teachings of Nishiguchi to filter out the fast axis components of light because both regions in the patterned retarder of Nishiguchi are configured to transmit light with fast axis components having the same phase (i.e., circularly polarized light differing only in the direction of rotation have the same fast axis components that are orthogonally arranged, but otherwise the same in phase).

Advantageously, by configuring the output polarizer of the present invention so as to pass only light affected by the slow axis, variations in intensity across the display resulting from the patterning of the retarder are substantially eliminated or reduced in level to the point where undesirable visual artefacts are imperceptible to a viewer.

May and Jung fail to make up for the deficiencies of Nishiguchi. Consequently, the presently claimed invention is both novel and inventive over the prior art of record.

For at least the above reasons, applicants respectfully request withdrawal of the rejections.

III. CONCLUSION

Accordingly, all claims 1-8 and 11-43 are believed to be allowable and the application is believed to be in condition for allowance. A prompt action to such end is earnestly solicited.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,

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